

REMARKS

In the July 1, 2005 Office Action, the Examiner noted that claims 1-27 were pending in the application; rejected claims 1, 3-5, 7, 8, 10-12, 14, 15, 17-19, 21, 22 and 24-27 under 35 USC § 102(b); and rejected claims 2, 6, 9, 13, 16, 20 and 23 under 35 USC § 103(a). In rejecting the claims, U.S. Patents 6,108,625 to Sabourin (Reference A in the July 1, 2005 Office Action) and 5,913,194 to Karaali et al. (Reference B in the January 3, 2005 Office Action) were cited. Claims 1-27 remain in the case. The Examiner's rejections are traversed below.

Rejections under 35 U.S.C. § 102(b)

In item 4 on pages 2-3 of the Office Action, claims 1, 3-5, 7, 8, 10-12, 14, 15, 17-19, 21, 22 and 24-27 were rejected under 35 USC § 102(b) as anticipated by Sabourin. In this rejection, it was asserted that "recalculating grapheme-phoneme conversion of the graphemes bordering on the at least one interface between the subwords as a function of the context of the at least one interface" (e.g., claim 1, last two lines) was disclosed at column 6, line 28 to column 7, line 14.

Response to Rejections in Request for Reconsideration

As discussed in the Request for Reconsideration filed November 1, 2005, column 6, line 28 to column 7, line 14 of Sabourin describes affix handler 402 (Fig. 4) which "transcribes input orthographies by identifying a root word within the orthography, and then using an 'affix rule knowledge base' to extend the basic transcription of the root word to the complete transcription" (column 6, lines 28-31). Three sets of transcription rules are provided in the affix rule knowledge base. "The first set specifies how root orthographies may be modified to generate their affixal forms" (column 6, lines 33-36). "The second set of transcription rules ... specifies how root transcriptions are modified when the affixal form of the word is formed" (column 6, lines 43-46) and "the third set of transcription rules ... specifies how the part of speech of the root word changes when modified to its affixal form" (column 6, lines 38-51). "In operation, orthographies received by affix handler 402 are decomposed ... into a sequence consisting of ... prefixes, root word, and suffixes. The root word is then transcribed using a dictionary lookup scheme" (column 6, lines 54-58). The transcription of the root word is modified "according to the transcription affix transformation rule base and the part-of-speech transformation rule base" (column 6, line 61-63).

Although "portions of certain affixes are contextually influenced, such as the suffix '+s' ... and the suffix '+ed'" (column 6, lines 65-67), the only detailed description of how context is used

is associated with Tables V and VII in columns 8 and 9 with reference to Fig. 5 which describes the operation of letter-to-phoneme handler 406. As illustrated in Table V, the context is between one letter or pair of letters (Source Grapheme Sequence) and the preceding or following letter. This is to be expected since it is in a description of the letter-to-phoneme handler 406 which does not deal with "subwords" (e.g., claim 1, line 4), but rather individual letters.

The use of the word "contextually" (column 6, lines 65-66) in the description of the affix handler of Sabourin also appears to relate to individual letters, not subwords as in the present invention. The examples in the portion of Sabourin cited as disclosing the recalculating operation recited in claim 1 are the letter "s", the letters "ed" and the letters "ing". None of these constitute "subwords" as that term is used in the specification, rather they are, as described in Sabourin, suffixes. The distinction is immediately apparent from the example in paragraph [0022] of the application where the subwords are "überflüssig" and "erweise," neither of which is a suffix and part of the first includes the common prefix "über".

More importantly, Sabourin does not disclose "recalculating grapheme-phoneme conversion" (claim 1, next-to-last line). As illustrated in Fig. 4, if dictionary accessor 401 is unable to convert a word, one or more attempts are made to convert the word using a series of handlers, each of which is used to accomplish the **first** conversion of a word or numeral. The only one of these handlers which appears to operate using subwords is compound word handler 405. The operation of the compound word handler is described in the paragraph spanning columns 7 and 8, the following two paragraphs, and Table IV. The first full paragraph in column 8 mentions the need to "resolve stress inconsistencies introduced by the concatenation ... by modifying the stress field of the output transcription so that there is only a single primary stress" (column 8, lines 6-9). However, there is no suggestion in this statement that there is any change in the phoneme used in the transcription, the only change is in the emphasis associated with the phoneme.

Like claim 1, the last two or three lines of claims 8 and 15 contain the limitation "recalculating grapheme-phoneme conversion of the graphemes bordering on the at least one interface between the subwords as a function of the context of the at least one interface" and claim 22 recites that the processing unit "recalculate(s) the grapheme-phoneme conversion of the graphemes bordering on the at least one interface between the subwords as a function of the context of the at least one interface" (claim 22, lines 10-12). Therefore, it is submitted that claims 8, 15 and 22 and claims 10-12, 14, 17-19, 21 and 24-27 which depend therefrom patentably distinguish over Sabourin for at least the reasons discussed above with respect to claim 1

In item 6 on page 4 of the Office Action, claims 2, 6, 9, 13, 16, 20 and 23 were rejected under 35 USC § 103(a) as unpatentable over Sabourin in view of Karaali et al. Nothing was cited or has been found in Karaali et al. suggesting modification of Sabourin to recalculate grapheme-phoneme conversion as recited in the independent claims. Therefore, it is submitted that claims 2, 6, 9, 13, 16, 20 and 23 which depend from claims 1, 8, 15 and 22 patentably distinguish over the applied art for at least the reasons discussed above with respect to the independent claims.

Advisory Action

In the November 18, 2005 Advisory Action, it was asserted that "Sabourin ... teaches, 'recalculating grapheme-phone[eme] conversion' at" column 8, lines 11-57. This portion of Sabourin is part of the description of compound word handler 405 and letter-to-phoneme handler 406. As discussed at the Examiner Interview held October 5, 2005, there is no "recalculating grapheme-phoneme conversion of the graphemes bordering on the at least one interface between the subwords as a function of the context of the at least one interface" (claim 1, last 2 lines) described in this or any other portion of Sabourin. Rather, this portion of Sabourin merely describes that if handlers 401-404 fail to generate an appropriate transcription for a word, the word is processed by compound word handler 405 and if it is unable to produce an appropriate transcription, letter to phoneme handler 406 is used. In both handlers 405 and 406, there is a single, new calculation of a grapheme-phoneme conversion, not a recalculation, as recited in the independent claims.

Instead of "recalculating grapheme-phoneme conversion of the graphemes bordering on the at least one interface between the subwords" (claim 1, last 2 lines), the portion of Sabourin cited in the Advisory Action only discloses "modifying the stress field of the output transcription" (column 8, lines 6-7) to "resolve stress inconsistencies introduced by the concatenation" (column 8, lines 5-6) in the compound word handler 405. Furthermore, there is no suggestion in Sabourin of using "context" in compound word handler 405.

The only mention of using "context" is with respect to the letter to phoneme handler 406 of Sabourin. However, there is no "recalculating ... as a function of the context of the at least one interface" (claim 1, last 2 lines) in the letter to phoneme handler 406. Rather "a nucleus grapheme sequence and its surrounding context" (column 8, lines 50-51) is used. The contexts in the examples provided in Table V of Sabourin are "before 'e' or 'i'", "between vowels" and "{r,l}__{vowel}". None of these examples are "subwords ... sequenced to produce at least one interface between the transcriptions of the subwords" (claim 1, lines 6-7), but merely letters,

which is natural since this portion of Sabourin is part of the description of the letter to phoneme handler 406.

The definition of "subword" is clear from the specification, e.g., paragraph [0019] which states that

subwords ... are constituents of a pronunciation lexicon. A minimum length is prescribed for the constituents being sought in order to restrict the number of possible decompositions to a sensible measure. Six letters have proved to be sensible in practice as minimum length for the German language.

Thus, the handler taught by Sabourin that is most relevant to the operations recited in claim 1 is the compound word handler 405. However, it is clear that the compound word handler 405 does not operate as recited in claim 1, due to the lack of both recalculation and use of context. There is nothing in Sabourin suggesting recalculation as recited in the independent claims and there is no suggestion to modify the use of context in the letter to phoneme handler 406 for use in the compound word handler 405 in the manner recited in the independent claims. Furthermore, there is no suggestion in Karaali et al. to modify Sabourin to meet the limitations recited in the independent claims.

In addition, Sabourin does not mention or hint at the problem solved by the invention, nor does it mention or hint at the solution to that problem, which are discussed in paragraphs [0025] to [0037] of the specification. For at least the above reasons, it is submitted that claim 1 and claims 3-5 and 7 which depend therefrom patentably distinguish over Sabourin.

Request for Examiner Interview

If the rejection of the claims based on Sabourin alone is not withdrawn as a result of the arguments above, the Examiner is respectfully requested to contact the undersigned prior to issuing the first Office Action after filing of the Request for Continued Examination, in accordance with MPEP § 706.07(b), to discuss what further amendments to the claims will clarify the differences between the invention and Sabourin.

Summary

It is submitted that references cited by the Examiner, taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-27 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

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Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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